استبيان للدجاج الحامل لعدوى مرض الاسهال الأبيض فى بعض قرى الصعيد

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الملخص

أشار فحص الدجاج المحلى فى بعض قرى الصعيد للطيور الحاملة لعدوى مرض الاسهال الأبيض باختيار التجمع السريع الى سعة انتشار هذه العدوى .

وقد تراوحت نسبة الطيور الحاملة للعدوى فى ٦ قرى من محافظة أسيوط باختيار واحد أجرى فى عام ١٩٦٦ – ١٩٦٧ بين ٥٣ر١ ، ٤٨ر٣٪ ، ومتوسط قدرة ٣٢ر٢٪ بينما كان متوسط هذه النسبة فى ثلاثة اختبارات متتالية خلال الفترة بين ١٩٧٠ – ١٩٧٥ لخمسة قرى من محافظة سوهاج هو ٧٥ر١٤٪ ، ٨٨ر١٤٪ ، ٣٢ر١٥٪ على التوالى .

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INCIDENCE OF PULLORUM DISEASE IN SOME VILLAGES OF UPPER EGYPT

(With 5 tables)

By

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Received at 24-4-75)

SUMMARY

Screening of native chickens in some villages of Upper Egypt for carriers of Sal. gallinarum-pullorum infection with the whole blood stained antigen test revealed a widespread distribution of the infection.

The incidence of reactors in 6 villages of Assiut Province ranged between 1.53 and 3.48% in one test in 1966/1967, where as it averaged 14.75, 14.88, and 15.32% among 5 villages of Sohag Province in 3ssuccessive test conductedd uring the period 1970 - 1975.

INTRODUCTION

Salmonella gallinarum - pullorum infecton in poultry is a serious egg - born disease which results in great econoomic losses to the poultry industry due to decrease in egg. production, fertility, and hachobility together with high. mortality in baby chicks.

In Egypt the majority of poultry population consists of small units of 10 - 20 birds owned by farmers who follow premitive methods in breeding and hatching. The so-called (balady hatcheries) distributed allover the country obtain their eggs from farmers in their vicinity and serve as the main source of supplying them with their requirement of day-old chicks. Under this system of production a high incidence and widespread of poultry diseases is expected, especially those of eggborne epidemiological character like pullorum disease. disease results in serious economic losse thies to the national poultry industrty, and unitlnow no policy or regulations could be adopted for its prevention and control in villages and commercial balady hatcheries.

BASSIOUNI EL-AHWAL and FOAD 1965) reported a high icidence of carriers of gallinarm - pullorum infection in some villages of Monofia Province in Delta. It is the aim of the present work to gain information obout the incidence and distribution of this infection in some villages of Upper EGYPT

TABLE 1. Incidenc of pullorum carriers in some villages of Assiut province 1966/1967

Village	No. of Tested birds	No. of reactors @	% of reactors
Awlad ilias	377	11	2.91%
B Bani Mohamed .	517	18	3.48%
Bani Mur . . .	411	7	1.70%
Elhawatka . . .	373	9	2.41%
Musha.	455	7	1.53%
Rifa	310	6	1.93%

@ Wole bloid-stained antigen test;

TLBLE 2 Incidence of pullorum carriers in some villages of Shoag 1970/1971. provnice

Village	No. of tested birds	No. of reactors	%of reactors
El-khalafia.	957	151	15.77%
Nagi-Elgibali. . . .	697	121	17.36%
N. Elsandak	490	89	18.16%
N. Meglad.	570	66	11.57%
N. Soror	378	41	10.84%

@ Whole blood stained antige test.

MATERIALS AND METHODS

Chickens : Mature chickens of the native varietis in 6 villages of Assiut province and 5 villages of Sohag province were screened for specific agglutinis for Sal. galliuarum - pullorum infection. IN 1966 - 1967 and 1970 - 1971. 310 up to 957 birds were examined in each village. Subsequently retesting was restricted to 500 birds in each of 5 villages of Sohag province to follow up the incidence of infection. In each village the farmers were asked to bring their birds for testing to a suitable central place away from sunlight and dust.

TABLE 3. **Incidence of pullorum carriers in some villages of Sohag province 1972/1973.**

Village	NO. of tested birds	No. of reactors @	% of reactors
El.—khalafia . . .	500	75	15%
N.—Elgibali	500	77	15.4%
N.—Elsandak . . .	500	91	18.2%
N.—Meglad	500	47	9.4%
N.—Soror	500	93	18.6%

@ Whole blood stained antigen test.

TABLE 4. **Incidence of pullorum carriers in some villages of Sohag province 1974/1975.**

Village	NO. of tested birds	NO. of reactors	% of reactors
El-Khalafia	500	75	15.0%
N.—Elgibali	500	77	15.4%
N.—Elsandak . . .	500	91	18.2%
N.—Meglad	500	47	9.4%
N.—Soror	500	93	18.6%

@ Whole-blood stained antigen test.

Serology : The whole-blood agglutination test (ScHaFFER, Mac-DONALD, HALL and BUNYEA 1931) was carried out in the usual way using the pullorum stained antigen manufactured by the Institute of Animal Health, Ministry of Agriculature, A.R.E.

Reading were recorded within one minute after mixing blood with antigen and only strong and distinct agglutinations were considered as positive (BASSIOUNI *et al* (1965). Weak and late reactions were not considered.

TABLE 5.—Incidence of pullorum carrriers in some villages of Sohag province during 1970/1975.

Village	percent of reactors		
	1970/1971	1972/1973	1974/1975
El-Khalafia. . . .	15.77	18.8	15.0
N.—Elgibali . . .	17.36	17.6	15.4
NN.—Elsandak .	18.16	17.4	18.2
N.—Meglad . . .	11.57	8.6	9.4
N.—Soror	10.84	12.0	18.6

a whole-blood stained antigene test.

DISCUSSION

From the results it is evident that Sal. gallinarum-pullorum infection is widely distributed among native chickens in the examined villages of Upper Egypt. A similar widespread has been reported by Bassiouni *et al* (1965) among some villages in Delta.

The incidence of carrier birds in 1966/1967 ranged between 1.53 and 3.48% (average 2.32%) among 6 villages of Assiut province which is astonishingly law than might be expected. However the incidence of infection was high among 5 villages of Sohag province, averaging 14.75%, 14.88%, and 15.32% in 3 successive tests carried out during the period 1970 to 1975.

The difficulty in the prevention and control of Sal. gallinarum-pullorum infection in villages and commercial balady hatcheries will remain as long as chickens are raised in small units under prviling village conditions, where they are continueausly exposed to the infection. Compulscry testing and alimination of carriers under reasonable compensation of the farmers, if feasible, as suggested by Bassiouni et al. (1965) may thus only lead to lowering the incidence of reactors but not to eradication of infection. Likewise, adopting strict regulations concerning hatching eggs for commercial balady hatcheries may be only beneficial if large supply flocks for hatching eggs are estiblished in the vicinty of the hatcheries where sanitation and sound maganent together with period testing can be adopted readily.

REFERENCES

1. **Bassiouni, A., El-Ahwal, A., and Foda, M.** (1965).Inidence infection with Salmonella gallinarum-pullorum in certain Egyptian villages the last 8 years 1956-1965. Vet, Med. J. Faculty *o- Vet. Med. Cairo Uni.* XI, 175.

2. **Schaffer, J.M., , Mac-Donald, A.D., Hall, W.L·, and Bunyea. H.,** (1931).A stained antigen for the rapid whole blood test for pullorum disease *J.Am. Vet. Med. Ass.*79, 236.

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